

FILE RECOVERED WITH TEXTEDIT 12-17-2022 AND SAVED AS PDF
ORIGINAL CREATION DATE OF THIS DOCUMENT WAS 9-28-1998
(DR)

.7#,&
,(HHHH
R
\\øxHä™€*-€-
€€-.€€€€€€

Brief Proposal for NEA Mars Project
Center for Experiments in Art, Information and Technology
California Institute of the Arts

David Rosenboom

In 1972, I wrote about something I called IRIS, Individual Resource Information System, (later published in my book, Biofeedback and the Arts, in 1974), in which the psychophysiological state of groups of individuals could be monitored, primarily through electrophysiological measurements, and translated into the qualities of a continuous musical product to observe emerging patterns of adaptation in society. Later, in a second book, Extended Musical Information with the Human Nervous System, I discussed the immense integrative powers of our sensory systems to detect emerging, global conditions resulting from enormous amounts of data when these are translated into the qualities of musical forms. By the year 2030, we may have refined these discoveries to the point that pioneers who settle on other planets—in this case, Mars—may be able to benefit from technology that can project continuous information about their physiological and psychological responses to their new, alien environments, their perceptions and adaptive strategies and emerging, new forms of organization and behavior, through a continuous mapping of key measurements of their brain's electrical and magnetic field activities and other important physiological functions onto the qualities of musical forms. In this way, the integrative powers of our ears and brains can sense emerging forms that may guide the evolution of humanity as it spreads throughout the solar system and beyond.

I propose a scenario in which the new inhabitants of Mars may engage in interactive conversations with a composer and a scientist as they all react to the self-organizing musical patterns heard in the inhabitants' neuroelectrical activities while they experience the effects of their new environment.

This would involve monitoring the brain activity of the Mars inhabitants and the use of signal analysis computer music software developed by the author. Some of the technical details of this work can be explored at the following MIT Press, electronic journals website. The monograph, Extended Musical Interface with the Human

Nervous System, by the author, is available here.

<http://mitpress.mit.edu/e-journals/Leonardo/isast/monograph1/rosenboom.html>

Login with the name: leonardo

Use the password: davinci

David Rosenboom, Composer
Dean, School of Music
California Institute of the Arts

email: david@music.calarts.edu

Potential Scientists to Include in the Interactive Conversations

J. A. Scott Kelso
Glenwood and Martha Creech Professor of Science
Director, Center for Complex Systems
Florida Atlantic University

"For the past twenty years Scott Kelso's research has focused on extending the physical concepts of self-organization and the mathematical tools of nonlinear dynamics to understand how human beings (and human brains) perceive, intend, learn, control, and coordinate complex behaviors. In this book (Dynamic Patterns, the Self-Organization of Brain and Behavior, MIT Press, 1995) Kelso proposes a new, general framework within which to connect brain, mind, and behavior."

(From a description of Kelso's recent book.)

Stuart Kauffman
Member of the Santa Fe Institute and Mac Arthur fellowship recipient.
A leading thinker on self-organization and the science of complexity as applied to biology.

Christopher Langton
Member of the Santa Fe Institute
A leading expert in the field of complexity theory and artificial life.

uŕ"hdNëPOLÓà~♣N^NuNV/
(n L"l&—È(/ I"h,NëJ"X0g\$/.
l"H"iŕ—È / l hŕ"h\$NëPO L"l&—È/ I"hNëX0(n~,N^NuNVN^Nu¥ NV/
(np/ l"H"i
—È8/ l h
"h<Në(n~,N^NuNVHÁ(n&l:+n<+BHΔH≈ êÖ>RGHxU l"H"i
—È@/ l h
"Å FÄ ò —
Ó
Ô
Û
>
Û
,,~`111011È
@
@
&`ÅÇíìKLyZ Û 1
A
C
a
{
|
ñ
::
Ö
Æ
Í
Ó
♣
Ö
Û
Û
I
>
~
|
,
.
°
~
>
?

©

R

C

B

✓

20

>>

111

/

!

! ?

! ?

! ?

! ?

! ? :

fi

二

Ö

 \wedge

q

r,àC n s å!å'b'c.+000Í2ä9P9R9U9V9W9X9Z9€9Ú9Û:

\$:~:ô:õ: ; `=0=1=^HH^-H^~^ÚV,(,hhÿ

hd ' 0 ^ E ^ J F

Æ =†/-††-B@H-:Color SW 2400

TimesAAAE', ‡.CEAIT Mars Proposal

Rosenboom

Rosenboom